Maps and Memes

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Abstract

In this paper I examine the question of whether or not the meme represents an advance on Discourse/Power (D/P) theoretical frameworks for analyzing imperial and/or indigenous maps. Memes are posited to represent an advance over many aspects of D/P analyses, supplying explanations for phenomena that the latter framework is simply not able to provide. Two sources of data are used in order to compare the 'Meme's Eye View' against D/P: Landscape Maps entered in an art contest in an Eastern James Bay village; and Cartographic Utterances, spoken during a youth public speaking event in the same location, the following day. The Meme's Eye View was found to give a very different, but complementary, analytic outcome, when compared to D/P. The meme is able to theorize maps as vehicles for cultural transmission. Mapping was found to be the primary mechanism for transfer between generations.

Background and Relevance

Memes

The meme is a unit of cultural transmission, similar to a gene, but applicable in the realm of culture. Dawkins (1976 and 1982) invented the term 'meme' as an analog to the gene. Distin (2005 and 2011) demonstrated that memetics and genetics are simply two instances of a general evolutionary process; they are not analogous to each other. Much has been made of the meme and whether or not it is appropriate, correct, or useful to use memes to explain cultural transmission (Blackmore, 1999; Dennett, 1995; Brodie, 1996; Aunger, 2002; Shennan, 2002; Cavalli-Sforza and Feldman, 1982; Cavalli-Sforza, 2000).

Distin (2005) dispels previous hesitations and confusions about where memes reside (both in minds and in the world), about their viral nature (memes go viral when transmission is horizontal), and about the implications of the particulate and distributed nature of the meme. Memes, like genes, are discrete entities; but unlike genes, individuals do not have a fixed set of memes upon birth. Individuals may interact with and create enormous numbers of ever changing meme-complexes, in the form of ideas, diagrams, skills, survival techniques, and most importantly for our purposes, maps.

Critical Cartography

Cartography is the art and science of making maps. Thus defined, cartography would seem to be a value-neutral activity or undertaking. Critical cartographers are map makers who challenge the alleged neutrality of maps, pointing out that maps always serve interests. When the interests of states, governments, corporations or other powerful institutions are served by maps, the maps themselves are posited by critical cartographers to embed or infuse the power inherent to the interests they serve.

Critical cartographers (Crampton, 2003 and 2010; Pickles, 2004; Curry, 1998; Harley, 1989; Wood, 1992) do not confine themselves to maps for their insights. Critical cartographers are heavily invested in theoretical frameworks developed outside of the discipline of geography. Like critical pedagogy (Freire, 1970), critical cartography makes maps into co-productions that break down user/producer dichotomies. Thus conceived, the map becomes a device for the assertion of power as much as for the empowerment of the user.

But some maps, by their design, preclude empowerment because of the erasures, silences and gaps inherent to that design. In response to such lacunae, indigenous groups have developed counter-mapping, a method for putting back the peoples formerly excluded from maps (Peluso, 1995).

Maps as assertions of power, and the analyses of such maps, have relied upon postmodern theorists, especially Foucault (1990, 2005). According to Foucault (2005), discourses of power are arranged in formations or groupings that mask their power through the naturalization of statements that always occur in the context of other statements. Statements include verbal utterances, diagrams, art, and maps. In a later work, Foucault (1990) describes power as diffuse and with many handles upon which it is leveraged. Maps are one such handle.

Combining early (discourse focused) and late (power focused) Foucauldian theoretical frameworks, I name my hybrid critical cartographic theoretical framework 'Discourse/Power,' deliberately invoking Foucauldian terminology, but upsetting sedimented and dogmatic Power/Knowledge frameworks already established by critical cartographers (cf. Foucault, 1980; Akerman, 2009; Edney, 2009; Wood, 1992; Burnett, 2009; Hostetler, 2009; Kivelson, 2009; Hefferman, 2009; Crampton, 2003 and 2010; Abrams and Hall, 2006; Pickles, 2004).

According to Foucault's writings on Discourse/Power, the formations of power implicate a whole order of geospatial technologies inside and outside of bodies, machines and territories. In this paper I examine the question of whether or not the meme represents an advance on Discourse/Power theoretical frameworks for analyzing imperial and/or indigenous maps

Methods and Data

Two types of data, 'cartographic utterances' and 'landscape maps' are each examined (and cross-examined) from two different perspectives: 'Discourse/Power' and 'the meme's eye view.'

Cartographic utterances consist of six statements made by six individuals during a public speaking contest held in Wemindji, Québec on March 25, 2010. These statements were chosen for their illumination of cartographic and spatial issues facing the youth of Wemindji today.

Cartographic utterances are examined from both Discourse/Power and meme's eye view perspectives in order to evaluate the strengths and challenges of each toward answering the primary research question. The primary research question is: what is the role of maps in the transfer of intergenerational indigenous knowledge? Does a memetic framework offer anything to a Foucauldian framework for analyzing the power of maps for enabling or disabling the transfer of intergenerational indigenous knowledge?

The six cartographic utterances are derived from the following youth speeches: "Matuuskach," "Camping/Blackstone Bay," "Going for a Walk," "Digital Devices/1," "Time in the Bush," and "Digital Devices/2." Four of the participants were females, including three in high school and one in elementary school; while two were young (primary/elementary) boys.

Landscape maps consists of six works of art from each of six categories (children 0-12, youth 13-34, youth/adult, adult 35-64, adult/elder, and elder 65+) of art entered into an art contest held in Wemindji, Québec on March 24, 2010. The principles guiding my examination of these maps include the presence or absence of cartographic symbols or perspectives; the depiction of landscapes 'from above' (whether oblique or perpendicular to the depicted surface); and the artistic composition of the maps. Other principles guiding my analysis include examination of the maps for the inclusion of discrete representations (or memes) of traditional activity on the land.

In addition to the six works of art from local contestants, I examine a map entered into the same art contest by the primary author of this paper. This 1:50,000 map, entitled 'Kaachiiwaapechuu' depicts the course of a three day walk in which I participated alongside children, youth, adults and elders from March 8-11, 2010. It provides a contrast to the locally produced art in terms of examining different kinds of oblique and normal (perpendicular) view maps from both Discourse/Power and meme's eye perspectives. It also verifies intergenerational knowledge occurrence 'on the ground' through commemorative activity on the land.

The inclusion of my own map in the art contest is justified in two ways. First, I was solicited by the manager of the art contest to enter my map into the contest. Second, my map depicts traditional activity inscribed by GPS and superimposed upon a Google Earth image. As such, it represents a contemporary 'geoweb' map, allowing for contrast and juxtaposition with the other maps entered into the contest (Scharl and Tochtermann, 2007).

Lastly, a website developed by the primary author serves as a repository and public display of locally produced works of art and youth public speeches. Entitled "Indigenous Technology and Science, James Bay" the website shows compatibility with memes due to the ability to bundle together a wide range of place-based materials. The materials so bundled are available to contemporary and future generations interested in their own heritage and in the effects of rapid cultural change.

The website is also part of the 'geoweb' in two senses: a web of indigenous knowledge both traditional and local that has existed, in part, for hundreds of years; and a web of device-enabled geospatial information that is coming to inform and overlay the older, traditional and already established web of indigenous knowledge (Eades, 2010; Carlson, 2008; Borgmann, 1984).

Results

Cartographic utterances and landscape maps perpetuate the idea of the land, of being and dwelling 'there' (the place depicted) in ways reminiscent of the artist's ancestors. In this way, cartographic representations come to be a primary vehicle for the vertical downward transmission of discrete representations of (maps/memes of) cultural knowledge.

The utterances of young public speakers similarly emphasize the land, but in a more questioning mode, challenging the status quo and in effect producing vertical

upwards transmission, in which elders and adults in the audience learn of the aspirations, challenges, hopes, dreams, and knowledge of youth.

Horizontally transmitted memes are revealed through utterances related to teaching and learning by playing with friends and siblings (as in a young boy's learning to hunt by playing with his friend at Matuuskach; or by another boy walking around town teaching his little brother about local places). Horizontal transmission in this case is revealed in an act of upward vertical transmission represented by youth public speaking (to elders).

Thus there is a double representation, or meta-representation evident in the (cartographic) utterances of the very young (children). The ability to meta-represent is posited as an innate ability of the mind, which is an extension of, and is loosely coupled with, the gene-defined brain (Distin, 2005; Blackmore, 1999).

I would take this further: in the present cases of art and public speaking, it is the ability to *map* (somewhat like imitating, but not the same) between generations (vertical transmission) and between individuals of the same generation (horizontal transmission), that is at the heart of the meta-representing, memetic, human mind. Distinct and different from mimesis (cf. Blackmore, 1999), mapping is more appropriate ground for discussing the meme and cultural transmission.

Both literally and as metaphor, the map, and more precisely, the act of *mapping*, is both performed and inscribed in bodies and brains. This strong assertion is true in the sense that bodies perform maps through not only physical, but also through mental, activity. Physical and mental map performances are not easily separated; indeed both maps and memes exist internal and external to the human body. Furthermore, the brain is structured like a set of stacked maps (Edelman, 1989; Searle, 1997).

This positing of maps as memes and of memes as mappings itself maps onto the concept of the geoweb, in which the geoweb is distributed and user-controlled, and includes old and new elements (Eades, 2010; Scharl and Tochtermann, 2007; Carlson, 2008).

Conclusions

As noted by Johnson (2007), the meme is an improvement over Discourse/Power in a number of ways. It should be used alongside Discourse/Power to strengthen the field of critical cartography. Not only power, but empowerment, would thus enter the purview of cartographers interested in challenging the status quo. As demonstrated in this paper, the people of Wemindji are using maps, mappings, art, and public speaking for the purposes of empowerment, local discourse and decision making, and communication.

As the analysis of data in the form of cartographic utterances and landscape maps have shown, these two forms of representation are being used locally for the enhancement and enablement of knowledge transmission in horizontal, oblique, and vertical directions. The latter (vertical) was shown to occur in both downward and upward directions, implying that elders are teaching youth and that youth are teaching elders. This bi-directional movement of memes was facilitated by multiple technological contexts such as broadcasting (the use of the microphone), posting (art on walls in an art contest), and the geoweb (posting multi-media components on the ITS site).

The geoweb component of this research is intended as both supplement to, and additional support for local knowledge production and transmission. In this regard it has been deemed successful. However, only through the continued use and development of geoweb technologies and features, such as tagging, posting, blogging, 'texting' and many other features, will the full potential of the geoweb be realized. Whether or not this comes to fruition, only time will tell.

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